THE EYE:

BY OBADIAH OPTIC.

——VARIOUS OBJECTS FROM THE SENSE,
VARIOUSLY REPRESENTING. MILTON.

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ORIGINAL.

ON THE MOTION OF FLUIDS IN VEGETABLES.

ALTHOUGH the motion of fluids in vegetables has excited much attention, the subject has nevertheless been but imperfectly investigated.

The theory that has been most generally adopted, is that which attributes the motion of these fluids to capillary attraction.

It has been ascertained that tubes, the radius of whose circles is not more than two lines, attract fluids with a power proportioned in an inverse ratio to their diameters. Hence it was thought no difficult matter to develope the *rationale* of circulation even in the most *minute* ramifications and leaves of plants. That this opinion is however, founded in error, will appear evident, if strong analogical evidence is admissible.

The smallest capillary tubes that could be procured in this city, when placed in water, raised the fluid but four inches above its surface. This will afford a *datum* whereby to estimate the power of attraction in tubes of the *smallest* diameters. Extending the relation that obtained between the power of those tubes and their diameters, which were one tenth of a line, would it be a just inference, that capillary attraction alone is adequate to the various distribution of the juices of the plant?

Admitting that the diameters of the vessels in the vegetable are inconceivably small, yet, when compared to the minute diameters of the tubes used in our experiment, we must admit that the former do not possess a power so much greater than the latter, as to transmit fluids to the summit of the lofty pine or majestic oak.

But further; to grant this theory the greatest *possible* latitude, the most minute plants alone, would be capable of transmitting to their ramifications and leaves the fluids absorbed from the earth. Even thus much, however, cannot be rendered at all probable.

If what we have said be true, the phœnomena of capillary attraction are not sufficient to explain the motion of fluids in vegetables. The inquisitive mind is therefore naturally led to seek for a co-operative cause in the performance of this important function. Important; and that too, highly so, when we advert to the fact, that in the regular and just performance of the functions of vegetables, is involved the *sine qua non* of man's existence. Whether we consider the immediate dependence of some savage tribes upon vegetables, or whether we regard the sustenance derived by man in a civilized state, partly from the vegetable and animal kingdoms collectively, the subject is equally worthy the attention of the curious enquirer.

Vegetables may be emphatically stiled the connecting medium of life and death in the human species. For by far the greater portion of animals, whether used by man from necessity, or as a luxury, derive their sustenance from the vegetable kingdom.—But to return to the more immediate consideration of our subject.—

We said, it became necessary to seek for more causes to explain the interesting function of circulation in vegetables; inasmuch as that of capillary attraction alone, does not appear to be sufficient.

Those persons, who upon this subject, have called to their assistance the expansive quality of heat, or, more properly speaking, caloric, and have referred to solar influence what could not be explained upon the principles already mentioned appear to have been fully aware of the incompleteness of this theory. But what they have done, is no more than a near approach to truth.

If solar influence have so great agency in this business, how happens it that plants not only grow very well, but flourish with most beautiful verdure in the frigid zone, where the benign influence of the sun is felt but a very small part of the year? If there be not *positive* proof, there is at least strong *presumptive* evidence of the circulation of the juices, under those circumstances.

Again: If solar influence be so material to the circulation of fluids, how are we to account for the rich verdure in the

winter season, of our *ever-greens*, emphatically so called; as the laurel, cedar, pine and many others? If neither the principles of capillary attraction, nor the agency of solar heat are equal to the explanation of the phœnomenon in question, it yet remains for us to shew, how the circulating mass of these fluids effect the routine of motion, which upon examination, is found to exist.

Were I at liberty to indulge in all the speculations to which this subject would naturally lead, more space than would be necessary for the present purpose, might perhaps be occupied. I shall therefore be limited; and begin by delivering the following propositions.

1. Plants are organized bodies.

2. They possess that principle which in the human body is called irritability.

3. The juices of plants, like the fluids of animals, are propelled, and circulate through the medium of irritability.

By organized bodies, I mean such as are endowed by nature with various parts peculiarly constructed, and adapted to perform certain functions connected with *life*. Mineral compounds are formed by the effects of simple, mechanical and chymical attraction, whereas organized bodies bear the most striking and impressive marks of design, and are distinguished by the principle of *life* from which the various organs derive the power of exercising their respective functions.

Life, I believe to be the same in the vegetable, that it is in the animal. What is its intimate nature, is not for us to determine; perhaps this is a mystery too profoundly enveloped--but why speak in this desponding language? When we advert to the surprising discoveries that have resulted to mankind from the researches of chymists and philosophers, may we not hope that the day will come, when this great *desideratum* shall be obtained? *(to be concluded)* B.

TO THE EDITOR OF THE EYE.

MR. OPTIC,

WELL sir, now I have had time to draw breath after reading ROBERT RUSTIC'S letter in your last number—let me ask you his address, that we wicked girls may pay him our respects in *propria persona*, as our tutor used to say—Do dear dear MR OPTIC turn him out that we may see his sweet *rustic* looking phiz—but ere you do, admonish him to be gen-

tle, for should he but shake his bison locks at us, we should all run away for fear.—Mercy on us, the very jingle of his mochasins (for I suppose he would not wear shoes for the world) would frighten us to death!—Of what tribe is he?—the heir apparent to *Big Bear* or *Little Turtle* perhaps?—How does *he* dress?—nothing but a blanket I suppose?—what a refined taste!—neither "flat," "low," "high," or "inconsistent"—but purely *natural*.

What a pity it is that he and his dear friend JERRY were ever separated—wicked, malicious dame Fortune, how could you sever two who were so completely fitted for each other? Do dear madam set your wheel agoing and trundle master BOBBY back again, that he may feast his eyes with copper-skins, shining in all the brilliancy of bear's grease, and he and JERRY pursue their *natural* taste through their native wilds in *rustic listlessness*.

Sometimes when my father comes in from the compting-house in the evening, and cannot find his specs, I read the advertisements, price-current, &c. to him, and have read of articles "neat as imported"—this term could not apply to our *rustic* satirist, or I think he never would be admitted to a *Philadelphia* tea-party.

> "Within a month—a little month—
> Or ere those shoes [mochasins] were old
> With which———————"

he travelled to this "far-famed and thrice renowned city of Philadelphia," we find him at a tea-party—O that I had been there to have seen the behaviour of this "fish out of water"—what grace in his deportment—how elegantly must he have handled a china cup just after leaving his wooden bowl, his dried venison and his succotash!—How *gentlemanly* his employment too in taking notes of the dress, the conversation, &c. of the circle in which he was hospitably admitted, ere, by his own confession he had been a "little month" in this city of brotherly love.——Ingrate!—here for once he seems to have forgotten his *natural* taste, for it is unnatural for man to be ungrateful, and viper like sting the bosom which fosters him.

Tell this *rustic* gentleman, Mr. OPTIC, that he has many things to learn—tell him that the author who satirizes the manners and customs of a people correctly, must have a thorough acquaintance with their character, habits and pursuits, and this requires a much longer time than a "little month"—

tell him too, that it is unmanly to attack those whom it is his duty to protect—with a weapon too which we cannot wield, and on ground where few, very few of us can appear.

Every stripling who has the scribbling mania, thinks our fashions, &c. fair game; but, to use a *rustic* simile, the horse has become so hacknied, that no author of candour and liberality in the present day is found willing to back him.

Your correspondent should recollect the difference of texture in the garments of the sexes—the pliability of our clothing, and our dexterity with the needle, render it easy to change the shape and appearance of our dresses; and our habits and pursuits give us leisure to do it often; to this it is owing that our fashions are more changeable than yours, and not to our wicked and perversely light heads, as has been *rustically* asserted.

The variety of fashions, at present among us, is another cause of complaint to him—the reason does not rest with us—like many grumblers in the present day, I shall throw it all upon the administration—president JEFFERSON I say is the cause of it all—don't start Mr. OPTIC—I mean no treason—the non-importation act is the reason why every one follows her own fashion: Formerly the London packet brought us semi-annually a fine and fashionably dressed London doll—how anxiously did we wait for captain M'D****** to produce the box—how eagerly we tore off the lid, and in eight and forty hours after, every mother's daughter of us was an exact model of the dear baby—but now, Mr. OPTIC, we are all obliged to cut and chip every one to her own taste, and this accounts for the great diversity.

I hope Mr. OPTIC you will excuse the great length of this epistle, and pardon me if my vivacity has in any part of it outran my prudence; but tell your *rustic* friend, that this is but a mole-hill to the mountain of vengeance we mean to hurl upon him, if he dare hereafter lay but the tip of his little finger upon one of us. ANN LIVELY.

SELECTED.

THE TWINS: A TALE.

(concluded from page 141.)

EMMA preparing to receive her babe restored, shrunk back. It was not JAMES. Astonishment and despair struggled in the countenance of EDWIN. He compared the child

with the lovely twin, which at that moment was sleeping in the cradle. There was no trace of similitude. Humanity however, pleaded in behalf of the little stranger, who undoubtedly had been a theft likewise. In vain did EDWIN search after his own child, or a father for the foundling. He returned to the oak: The company were dispersed. The gentle-hearted EMMA adopted it; she fed it out of the same cup, dressed it in similar robes, and rocked it in the same cradle with her EDWARD. But the foundling was a female, and they named her RURILLA, because they had taken her from the field. As it encreased in age, it improved in beauty, and was suffered to assume the name of daughter. EDWARD and RURILLA were inseparable playmates, and they continued to occupy the same bed, and to learn the same books, till on account of the difference of their sex, it was judged proper to part them. By this time the beauty of RURILLA, and the elegance of EDWARD were matters of conversation in the neighbourhood, and the little bosoms of their companions began to flutter in favour of each; their own bosoms, mean time fluttering in favour of one another. Thus, hand in hand, they trod together the gay paths of youth till the age of fourteen, without interruption, about which time EDWARD fell sick; RURILLA acted the nurse, with ten times more than a nurse's officiousness. He was at the point of death: A person came at this crisis to EDWIN's house, hastily demanding an audience—he was admitted—the stranger was at the foot of EDWIN in a moment, and spoke thus: The woman who stole from you one of the loveliest children upon earth is no more; the child itself is in the last agony; in search of my own child I found him.—He has lived in my heart: He is informed of his birth and sighs to expire in the arms of a father—I have had him—I rescued him from the robber three years ago. EDWARD, who overheard the discourse as he sat in a chair supported by pillows, exclaimed, my brother, my long lost brother dying! I thought so—we are but one—bring him and let us die, as we were born, together. The person, looking at EDWARD, said, kind Heaven, sure you are he, else never was such a resemblance; but I must perform my duty—he went away—EMMA changed colour—EDWIN was silent—EDWARD cried out that his pangs were now all for his brother—RURILLA pressed her cheek upon EDWARD's bosom. The stranger returned with a young man in a litter—It was JAMES—JAMES in the misery of fraternal sympathy—EDWARD saw the dear

counter-part of himself, and the poor invalid brothers were put into the arms of one another. Sure there was a panacea in their embraces! They revived—the stranger was in the next moment the most pathetic object—he cast his eye upon RURILLA, and dropped lifeless upon the floor—I claim her, I claim her, said he—she is my daughter, my stolen daughter, my heart confesses her; my eye marks her by the very mole that was pointed out to me by a mother's criterion the moment she was born: O, Providence, Providence—the old man spoke the truth—RURILLA was his daughter, who had been stolen from him about the time of JAMES, and JAMES fell into his hands by an accident equally fortunate and uncommon. Why should I amplify the story? Why should I keep the reader from the voluptuousness of happy events? The twins recovered, to the joy of the parents. RURILLA was found worthy to adorn the arms of the enchanting EDWARD. The father of RURILLA became one of the family, and Providence in the end, fully rewarded the fidelity of EDWARD and EMMA. Is a moral required to this tale? Why need I run into that prolix pedantry of pointing it out? Is it not obvious; humanity is rewarded? When you are endeavouring to redress your own grievances, neglect not the opportunity of redressing those of a neighbour. EDWIN enquiring for his own child, found it not, but fostered in the bosom of his wife, the child of another; at that very time another father was upon the search, and though equally disappointed, was equally animated by social sensibility.—Enough—another sentence would explain away the meaning.

THE UTILITY OF WIT; A STORY BY DR. JOHNSON.

THE first time, said the doctor, that I was in company with Foote, was at Fitzherbert's. Having no good opinion of the fellow, I was resolved not to be pleased, and it is very difficult to please a man against his will. I went on eating my dinner pretty sullenly, affecting not to mind him. But the dog was so very comical, that I was obliged to lay down my knife and fork, throw myself back upon my chair, and fairly laugh it out. No, sir, he was irresistible. He upon one occasion experienced, in an extraordinary degree, the efficacy of his powers of entertaining. Amongst the many and various modes which he tried of getting money, he became a partner with a small-beer brewer, and he was to have a share of the

profits for procuring customers amongst his numerous acquaintances. Fitzherbert was one who took his small-beer; but it was so bad, that the servants resolved not to drink it. They were at some loss how to notify their resolution, being afraid of offending their master, who they knew, liked Foote much as a companion. At last they fixed upon a little black boy, who was rather a favourite, to be their deputy, and deliver their remonstrance; and having invested him with the whole authority of the kitchen, he was to inform Mr. Fitzherbert, in all their names, upon a certain day, that they would drink Foote's small-beer no more. On that day Foote happened to dine at Fitzherbert's, and this boy served at table; and he was so delighted with Foote's stories, and merriment, and grimace, that when he went down stairs, he told them, "This is the finest man I have ever seen. I will not deliver your message. I will drink his small-beer."

CUTTING TEETH.

A PARISH-OFFICER perambulating his district to take a list of such of the inhabitants as were liable to be drawn for recruiting the militia, saw an old *combmaker* at work, and thus addressed him: "Pray, honest friend, how old are you?"—"Not old enough (answered he) to be chosen a militia-man; I am a mere infant:—Don't you observe I am *cutting my teeth?*"

A SOVEREIGN, AND A SCHOOL-MASTER.

KING Charles II. on a certain time paying a visit to Dr. Busby, the doctor is said to have strutted through his school with his hat upon his head, while his Majesty walked complaisantly behind him with his hat under his arm; but, when he was taking his leave at the door, the doctor, with great humility, thus addressed himself: "Sir, I hope your Majesty will excuse my want of respect hitherto; but if my boys were to imagine there was a greater in the kingdom than myself, I should never be able to rule them."

TO CORRESPONDENTS

THE wit of *Ann Lively* is of the true attic kind, and with good humour, she has chastised our *Rustic*—Between these combattants we do not wish at present to stand; they seem well matched and shall have fair play. O. O.

Poetical Department.

ORIGINAL.

MY NATIVE PLACE.

AS an exotic plant, removed
From native soil to distant clime—
So, far from thee, bless'd land, I've roved,
*Acadia** rough, but still sublime.—

Rough in repute with those who know
Nought of thy health-diffusing air;
Thy cliffy shores a prospect show
Sublime—thy cultured fields more fair.

Thy woody mountains tow'ring high,
A landscape grand to view present,
Their summits seem to pierce the sky,
With scatter'd farms on their ascent.

Along their broad extended sides,
The hardy sons of labour thrive,
And the dark forest far divides,
The habitations where they live.

From fertile plains, where kinder soil,
Teem'd its luxuriant, rich increase,
Oft have I seen th' incessant toil
Of mountain woodsmen felling trees.

Where erst the furious beast had ranged,
Where erst the Indian sought his game,
By persevering labour changed,
The wilderness a field became.

Salubrious breezes greet thy vales,
And Health inhabits ev'ry cot;
Disease, with visage sad, assails
But seldom, this auspicious spot.

Here my infantile life was spent,
In sports congenial with my years;
No griefs my tender bosom rent,
No sorrows fill'd my eyes with tears.

* The original name of *Nova Scotia* in North America.

Here, I remember, oft at dawn,
An aged son of Nature stray'd
From hut grotesque to the fair lawn,
And thus to the bright sun he pray'd.

'O bless with thy reviving heat,
The plains, the woods, and tow'ring hills,
And cheer the Indian's lone retreat,
And warm the little spot he tills:

'Shed thy sweet influence o'er the land,
And bless the white-man's cultured field,
Give the rich harvest to his hand,
And make his fruit-trees plenteous yield.'

Then he the sportive youth caress'd,
And taught them exercises strong,
Whilst we admired him rudely dress'd,
And strove to learn his ruder song.

Thro' the rich meadow oft I've stray'd,
And traced the riv'let's winding stream;
Or, in the spreading oak's cool shade,
Sought shelter from the noon-day beam.

Ah, happy hours, ye've pass'd away!
Yet oft will mem'ry love to trace
The scenes of early youth so gay,
I've known in thee my native place.

Then, foster'd with parental care,
Unknown to me was sorrow's sigh;
But since, alas, I've had my share
Of griefs beneath a foreign sky.

Then, with sweet transport I could prove
The joys which kindred spirits know,
The pleasures of fraternal love,
Whence raptures inexpressive flow.

No more I view those pleasing scenes—
Parental care, alas! no more!
Extended distance intervenes,
For long I've left *Acadia*'s shore.

But happiness is not confined—
Her empire seas nor hills can bound,
She deigns to dwell in ev'ry mind
Where virtuous sentiments are found.

Columbia, bless'd by Heav'n, is known
To be the subject of her smiles;
Hence, from my bosom sorrow's flown,
And joy each passing hour beguiles.

Here I have found a lovely friend—
In even tide our pleasures flow;
And num'rous blessings sweetly blend;
O may our hearts their AUTHOR know. ALICIAN.

☞ The following song was composed by a *blind man* in *Liverpool*; and, as far as I know, has never been printed, at any rate not in *America*. A copy of it was recently sent in a letter from *Ireland* to a gentleman in *Philadelphia*. THE STRANGER.

SONG FOR AMERICA.

YE men of Columbia, O hail the great day,
Which nerved your gigantic domain;—
Which taught the oppressed to spurn lawless sway,
And give the vast world a new rëign:
Yes, hail the bless'd moment when awfully grand,
Your Congress pronounced the decree,
Which told ancient realms that your forest-crown'd land,
From bondage resolved to be free.

Those warriors who fell in your soul-cheering cause,
To the true sons of freedom are dear;
Their worth th' unborn shall rehearse with applause,
And bedew their cold turf with a tear:
O cherish their names, let their suff'rings and deeds,
Go forth on the wings of the wind,
And as man, prostrate man, your high destiny reads,
May he learn his own chains to unbind.

As he tills your rich glebe the old peasant shall tell,
While his bosom with energy glows,
How your WARREN expired, how MONTGOMERY fell,
And how WASHINGTON baffled your foes:
With transport his offspring shall catch the glad sound,
And as freedom illumines each breast,
Their country's defenders with praise shall be crown'd,
While her spoilers they learn to detest.

By those fields that were ravaged, those towns that were fired,
By those wrongs which your females endured,

By those blood-sprinkled groves where your warriors expired,
O, preserve what your prowess procured:
And reflect that your rights are the rights of mankind,
To all they were bounteously giv'n,
That he who in chains would his fellow-man bind,
Uplifts his proud arm against heav'n.

How can you who have felt th' oppressor's proud hand,
Who for freedom all perils would brave,
How can you have peace while one foot of your land
Is disgraced by the toil of A SLAVE!
O rouse then in spite of a *merciless few*,
And pronounce this immortal decree—
Whate'er be man's tenets, his fortune, his *hue*,
He is man—and shall therefore be free.

ORIGINAL.

CRAZY MARY—A SONG.

O! I will wander down to ocean's billow,
Sit on the shelvy sea-beat rock at eve;
And lonely weave
My wreath of weeping willow.

When the gale's whisper, thro' the low reeds dying,
Breathes slow—and pauses oft in stillness deep;
Lorn will I weep,
And sigh with each gale's sighing.

Near where the black rocks rise, all wild and frowning,
And the wide reefy shoal of horror mark:
Struck by love's bark—
He sunk—I saw him drowning:

On the cliff's jutting peak I stood before him,
And in the storm loud shriek'd—he heard my cry—
Raised his hand high,
And then the waves roll'd o'er him.

I never saw my love again, O sadness!
But when the red moon, new from her sea cave,
Sets on the wave—
Sweet, sweetest time of gladness!

Thro' the thin mist, o'er ocean's silence gliding,
He'll come, and I will clasp him, weeping glad,
My burning head
In his cold bosom hiding.

GLORMON.